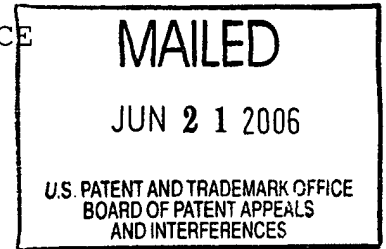


The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES



Ex parte ROBERT RASMUSSEN and JIANPING P. YANG

Appeal No. 2006-0247
Application No. 09/589,055

ON BRIEF

Before KIMLIN, KRATZ, and JEFFREY T. SMITH, Administrative Patent Judges.

KRATZ, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 16-37 and 48-54. We have jurisdiction pursuant to 35 U.S.C. § 134.

BACKGROUND

Appellants' invention relates to a phosphor particle bonded substrate. The substrates are useful in flat panel displays, such as a field emission display (FED) device. See numbered pages 2-4 of appellants' specification. An understanding of the invention can be derived from a reading of exemplary claim 16, which is reproduced below.

16. A phosphor particle bounded substrate formed
by a method comprising:
applying phosphor particles to the substrate;
immersing the substrate into a binder solution;
and
removing the substrate from the binder solution at
a predetermined rate.

The prior art references of record relied upon by the
examiner in rejecting the appealed claims are:

Rabatin	3,617,743	Nov. 02, 1971
Speigel et al. (Speigel)	3,763,051	Oct. 02, 1973
Unnai et al. (Unnai)	4,293,586	Oct. 06, 1981
Higton et al. (Higton)	4,365,184	Dec. 21, 1982
Bryan et al. (Bryan)	4,983,847	Jan. 08, 1991
Mohacsi	5,200,233	Apr. 06, 1993
Dahlquist et al. (Dahlquist)	5,569,485	Oct. 29, 1996
Kim et al. (Kim)	5,723,070	Mar. 03, 1998

Dictionary Definition of the word "substrate", The American
Heritage Dictionary of the English Language, Fourth Edition 2000.

Claims 16-19, 21, 23-31, 33, 35-37, 48, 50 and 52-54 stand
rejected under 35 U.S.C. § 102(b) as anticipated by or, in the
alternative, under 35 U.S.C. § 103(a) as being obvious over
Speigel. Claims 16-19, 21, 23-31, 33, 35-37, 48, 50 and 52-54
stand rejected under 35 U.S.C. § 103(a) as being unpatentable

over Speigel in view of Dinh. Claims 20, 32 and 49 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Speigel in view of Unnai. Claims 20, 32 and 49 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Speigel in view of Dinh and Unnai. Claims 22, 34 and 51 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Speigel in view of Kim. Claims 22, 34 and 51 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Speigel in view of Dinh and Kim. Claims 26 and 27 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Speigel in view of Mohacsi or Dahlquist, Higton and Bryan. Claims 26 and 27 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Speigel in view of Dinh, Mohacsi or Dahlquist, Higton and Bryan. Claims 26 and 28 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Speigel in view of Mohacsi or Dahlquist, and Rabatin. Claims 26 and 28 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Speigel in view of Dinh, Mohacsi or Dahlquist and Rabatin. Claims 26 and 29 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Speigel in view of Mohacsi or Dahlquist and Higton. Claims 26 and 29 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Speigel in view of Dinh, Mohacsi or Dahlquist and Higton. Claim 30 stands rejected

under 35 U.S.C. § 103(a) as being unpatentable over Spiegel in view of Higton, Bryan or Rabatin. Claim 30 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Spiegel in view of Dinh, and Higton, Bryan or Rabatin.¹

We refer to the brief and to the answer for a complete exposition of the opposing viewpoints expressed by appellants and the examiner concerning the issues before us on this appeal.

OPINION

Having carefully considered each of appellants' arguments set forth in the brief, appellants have not persuaded us of reversible error on the part of the examiner. Accordingly, we will affirm the examiner's rejections for substantially the reasons set forth by the examiner in the answer. We add the following for emphasis.

Since the appealed claims are in product-by-process format, certain principles of patent jurisprudence apply. We note that the patentability of a product is a separate consideration from that of the process by which it is made. See In re Thorpe, 777 F.2d 695, 697, 227 USPQ 964, 966 (Fed. Cir. 1985). Moreover,

¹ A separate rejection of claims 16-37, 53, and 54 under the second paragraph of § 112 was withdrawn by the examiner (answer, page 2).

determination of the patentability of a product-by-process claim is based on the product itself. See In re Brown, 459 F.2d 531, 535, 173 USPQ 685, 688 (CCPA 1972).

Also, we observe that in proceedings before the U.S. Patent and Trademark Office, claims are interpreted by giving words their broadest reasonable meanings in their ordinary usage, taking into account the written description found in the specification, as the claim terms would be understood by one of ordinary skill in the art. See In re Morris, 127 F.3d 1048, 1054, 44 USPQ2d 1023, 1027 (Fed. Cir. 1997); In re Zletz, 893 F.2d 319, 321-22, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989). Applying these principles, we note that all of the claims on appeal require, as at least a part of the claimed subject matter, a phosphor particle bounded substrate or phosphor particle bounded anode electrode that is formed by a method wherein the substrate or anode, after applying phosphor particles thereto, is removed from a binder solution; for example, after being submerged into the binder solution. Given the required binder solution contacting step conducted in forming the claimed substrate, it is reasonably concluded that the product includes some binder material associated therewith.

Claims 16-19, 21, 23-31, 33, 35-37, 48, 50 and 52-54

We start with the examiner's § 102/§ 103 rejection of claims 16-19, 21, 23-31, 33, 35-37, 48, 50 and 52-54 over Spiegel. We note that appellants argue the claims as a group. Thus, we select claim 16 as the representative claim, on which we shall decide this appeal as to this ground of rejection.

Whether a rejection is under 35 U.S.C. § 102 or § 103, when the appellants' product and that of the prior art appear to be identical or substantially identical, the burden shifts to the appellants to provide evidence that the prior art product does not necessarily or inherently possess the relied-upon characteristics of the appellants' claimed product. See In re Fitzgerald, 619 F.2d 67, 70, 205 USPQ 594, 596 (CCPA 1980); In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433-34 (CCPA 1977); In re Fessmann, 489 F.2d 742, 745, 180 USPQ 324, 326 (CCPA 1974). The reason is that the Patent and Trademark Office is not able to manufacture and compare products. See Best, 562 F.2d at 1255, 195 USPQ at 434; In re Brown, 459 F.2d 531, 535, 173 USPQ 685, 688 (CCPA 1972). Here, the examiner has applied a reference that discloses a product that appears to be embraced by the products falling within the scope of representative claim 16. Yet, appellants have not met the requisite burden to show that

the product-by-process limitation actually results in a different product for reasons set forth below and in the answer.

Like appellants, Spiegel discloses a phosphor particle bounded substrate that is disclosed as being useful in a display device. Spiegel teaches that metallic segments (substrates) that are to be coated are pressed into a layer of phosphor suspension that includes a binder, such as potassium silicate, then lifted out of the suspension and allowed to dry. The coated substrate segments are heated. While representative claim 16 is not limited to using a potassium silicate binder, appellants disclose potassium silicate as a useful binder for making their product. See pages 9 and 10 of appellants' specification. Thus, Spiegel discloses a product phosphor bounded substrate that reasonably corresponds to the substrate required by representative claim 16, as asserted by the examiner in the answer.

Appellants do not argue that the product required by representative claim 16 differs from the product of Spiegel based on the materials used in forming the coated substrate. Rather, appellants maintain that the claimed product differs from the phosphor bounded product of Spiegel based on the binding strength of the phosphor particles to each other and the substrate that is asserted as being present in appellants' claimed product. In

this regard, appellants maintain that the claim requirement for a product that is obtained by employing a predetermined removal rate of a substrate from the binder solution results in a different product structure from that of Speigel; that is, a product with the characteristic of stronger bonding of the phosphor particles to each other and to the substrate than would be obtained in Speigel's product.

We do not find that argument persuasive. It is well settled that counsel's unsupported arguments in the brief are no substitute for objective evidence. In re Pearson, 494 F.2d 1399, 1405, 181 USPQ 641, 646 (CCPA 1974). Moreover, representative claim 16 does not require any particular amount or type of binder to be employed in the binder solution. Nor does representative claim 16 require any particular substrate withdrawal rate that is predetermined for enhancing binding strength.

With respect to the argued product-by-process distinction, appellants have not established by their arguments that Spiegel does not disclose or suggest a phosphor bounded substrate that falls within the scope of representative claim 16. In this regard, the product called for in representative claim 16 is not limited in terms of binding strength as appellants maintain in their arguments. Given the scope of that representative claim,

appellants' contentions in the brief simply miss the mark in attempting to establish a product distinction based on binding strength. As such, the unsupported arguments asserting a distinguishing product based on binding strength in the brief do not serve to actually establish that the claimed product (based on the recited product-by-process limitations) differs from that of the applied prior art.

The examiner alternatively contends that an intermediate product of Spiegel (a flat flexible vinyl sheet with a layer of phosphor suspension thereon) anticipates or renders the subject matter of representative claim 16 unpatentable. Because we determine that Spiegel's phosphor bounded metallic segments anticipate and, in the alternative, render obvious the claimed subject matter, we need not further address this alternative basis for the examiner's anticipation/obviousness rejection over Spiegel other than to note that our affirmance encompasses that alternative for reasons stated by the examiner in the answer. In this regard, appellants' arguments concerning the lack of any binding to the vinyl sheet in Spiegel is not persuasive for reasons set forth by the examiner at page 24 of the answer.

On this record, it follows that we shall sustain the examiner's anticipation and obviousness rejections of claims 16-19, 21, 23-31, 33, 35-37, 48, 50 and 52-54 over Spiegel.

Concerning the examiner's separate rejection of the same claims as obvious over Spiegel in view of Dinh, we select claim 16 as the representative claim of these rejected claims, which claims are argued as a group. For the reasons set forth above and in the answer, Spiegel alone furnishes sufficient evidence to establish the obviousness of representative claim 16.

Appellants contend that Spiegel teaches away from the claimed invention in that Spiegel discloses pressing the substrate in a suspension maintained on a vinyl sheet whereas appellants claimed' product is prepared using an immersion step in a binder solution. As to the specific question of "teaching away" raised in the brief, our reviewing court in In re Gurley, 27 F.3d 551, 553, 31 USPQ2d 1130, 1131 (Fed. Cir. 1994) stated:

[a] reference may be said to teach away when a person of ordinary skill, upon [examining] the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant.

Here, appellants' "teaching away" argument is misdirected at the process steps employed by Spiegel rather than the product of

Speigel that is being applied against the claimed product. Those process steps have simply not been established as a teaching away from the claimed product subject matter as appellants maintain. In this regard, we find no discouragement in Speigel from obtaining a phosphor bounded substrate product that can be utilized in a display device.

Because the additional teachings of Dinh are unnecessary to the examiner's obviousness rejection for reasons set forth above and in the answer, we will not burden the record with further commentary concerning Dinh other than to note our agreement with the examiner's response to those arguments. In this regard, appellants have not established nor do we find that Dinh militates against the teachings of Speigel concerning the formation of a phosphor bounded metallic substrate.

Thus, we affirm the examiner's separate obviousness rejection of claims 16-19, 21, 23-31, 33, 35-37, 48, 50 and 52-54 over Speigel taken with Dinh.

Claims 20, 32 and 49

Appellants do not argue these claims separately. Thus, we select claim 20 as the representative claim for each of the examiner's separate § 103 rejections of claims 20, 32 and 49. Appellants do not advance any additional arguments against the

examiner's obviousness rejections of claims 20, 32 and 49 based on the examiner's additional reliance on Unnai. Rather, appellants refer to their arguments made with respect to the independent claims (claim 16 is representative) in urging reversal of the rejections of this grouping of claims. Because we find those arguments unpersuasive for the reasons stated above and in the answer, we shall also affirm the examiner's rejection of claims 20, 32 and 49 under 35 U.S.C. § 103(a) as being unpatentable over Spiegel in view of Unnai and the examiner's rejection of claims 20, 32 and 49 under 35 U.S.C. § 103(a) as being unpatentable over Spiegel in view of Dinh and Unnai.

Claims 22, 34 and 51

Appellants do not argue these claims separately. Thus, we select claim 22 as the representative claim for each of the examiner's separate § 103 rejections of claims 22, 34 and 51. Appellants do not advance any additional arguments against the examiner's obviousness rejections of claims 22, 34 and 51 based on the examiner's additional reliance on Kim in the rejections thereof. Rather, appellants refer to their arguments made with respect to the independent claims (claim 16 is representative) in urging reversal of the rejections of this grouping of claims. Because we find those arguments unpersuasive for the reasons

stated above and in the answer, we also affirm the examiner's rejection of claims 22, 34 and 51 under 35 U.S.C. § 103(a) as being unpatentable over Speigel in view of Kim and the examiner's rejection of claims 22, 34 and 51 under 35 U.S.C. § 103(a) as being unpatentable over Speigel in view of Dinh and Kim.

Claims 26 and 27

Appellants do not argue these claims separately. Thus, we select claim 26 as the representative claim for each of the examiner's separate § 103 rejections of claims 26 and 27. Appellants do not advance any additional arguments against the examiner's obviousness rejections of claims 26 and 27 based on the examiner's additional reliance on Mohacsi or Dahlquist, Higton and Bryan in the rejections thereof. Rather, appellants refer to their arguments made with respect to the independent claims (claim 16 is representative) in urging reversal of the rejections of this grouping of dependent claims. Because we find those arguments unpersuasive for the reasons stated above and in the answer, we also affirm the examiner's rejection of claims 26 and 27 under 35 U.S.C. § 103(a) as being unpatentable over Speigel in view of Mohacsi or Dahlquist, Higton and Bryan and the examiner's rejection of claims 26 and 27 under 35 U.S.C. § 103(a)

as being unpatentable over Speigel in view of Dinh, Mohacsi or Dahlquist, Higton and Bryan.

Claims 26 and 28

Appellants do not argue these claims separately. Thus, we select claim 26 as the representative claim for each of the examiner's separate § 103 rejections of claims 26 and 28. Appellants do not advance any additional arguments against the examiner's obviousness rejections of claims 26 and 28 based on the examiner's additional reliance on Mohacsi or Dahlquist and Rabatin in the rejections thereof. Rather, appellants refer to their arguments made with respect to the independent claims (claim 16 is representative) in urging reversal of the rejections of this grouping of dependent claims. Because we find those arguments unpersuasive for the reasons stated above and in the answer, we also affirm the examiner's rejection of claims 26 and 28 under 35 U.S.C. § 103(a) as being unpatentable over Speigel in view of Mohacsi or Dahlquist and Rabatin, and the examiner's rejection of claims 26 and 28 under 35 U.S.C. § 103(a) as being unpatentable over Speigel in view of Dinh, Mohacsi or Dahlquist and Rabatin.

Claims 26 and 29

Appellants do not argue these claims separately. Thus, we select claim 26 as the representative claim for each of the examiner's separate § 103 rejections of claims 26 and 29. Appellants do not advance any additional arguments against the examiner's obviousness rejections of claims 26 and 29 based on the examiner's additional reliance on Mohacsi or Dahlquist and Higton in the rejections thereof. Rather, appellants refer to their arguments made with respect to the independent claims (claim 16 is representative) in urging reversal of the rejections of this grouping of dependent claims. Because we find those arguments unpersuasive for the reasons stated above and in the answer, we also affirm the examiner's rejection of claims 26 and 29 under 35 U.S.C. § 103(a) as being unpatentable over Spiegel in view of Mohacsi or Dahlquist and Higton, and the examiner's rejection of claims 26 and 29 under 35 U.S.C. § 103(a) as being unpatentable over Spiegel in view of Dinh, Mohacsi or Dahlquist and Higton.

Claim 30

Appellants do not advance any additional arguments against the examiner's obviousness rejections of claims 30 based on the examiner's additional reliance on Higton, Bryan and Rabatin in

the rejections thereof. Rather, appellants refer to their arguments made with respect to the independent claim 16 in urging reversal of the rejections of this grouping of dependent claims. Because we find those arguments unpersuasive for the reasons stated above and in the answer, we also affirm the examiner's rejection of claim 30 under 35 U.S.C. § 103(a) as being unpatentable over Spiegel in view of Higton, Bryan or Rabatin, and the examiner's rejection of claim 30 under 35 U.S.C. § 103(a) as being unpatentable over Spiegel in view of Dinh, Higton, Bryan or Rabatin.

CONCLUSION

The decision of the examiner is affirmed.

AFFIRMED

JEFFREY T. SMITH
Administrative Patent Judge

PFK/sld

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